

Common Cartridge is not SCORM: A Note¹

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The Common Cartridge specification explains in detail the structure of a common cartridge and the conditions for conformance with the specification. An extensive [set of frequently asked questions](#) on the IMS web site also compares Common Cartridge with SCORM. In particular it explains that Common Cartridge targets a usage different from that of SCORM: While SCORM mainly addresses computer based training, where a learner is learning on her own interacting with a computer, Common Cartridge addresses blended learning scenarios where a teacher (or a community) plans a course.

These different target scenarios imply profound differences for the kind of support both specifications require from a learning management system (LMS). The adequate support for using SCORM content is the integration of a SCORM player into the LMS which emulates the computer the learner would interact with if she were on her own.

The same kind of support – integration of a Common Cartridge player into an LMS – is possible, but it would miss the specific points of the Common Cartridge. In fact a major motivation for the development of the Common Cartridge specification was the experience that prefabricated sets of content are rarely optimal for the needs of teachers or learners in blended learning scenarios and that it takes the pedagogic and didactic competence of the teacher to make best use of them in his course.

In a blended learning scenario the prime addressee of a common cartridge is not the learner but the teacher. The LMS should give a teacher or instructional designer the possibility to select from a common cartridge the content items that are appropriate for his course design and to make them available to the learners. This is very similar to the use of textbooks in teaching where teachers usually select and recommend what to read, combining content from a variety of textbooks (cartridges) as they find appropriate.

Most current LMS already provide the teacher with tools to render web content, to discuss topics in forums and to select questions from a question bank for building tests. Therefore all that is required to make full use of Common Cartridges is an import function which puts the content of a cartridge into the appropriate places where these items are stored internally and to aid the teacher in finding them, making use of the organization element that comes with the cartridge. Even where the LMS does not support QTI 1.2 natively, it may convert the QTI questions from the cartridge during import into its internal format before making them accessible for the users.

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Note that the Common Cartridge access control concept offers the possibility to restrict access for individual resources. This is very much in line with the intention that a user may be interested only in some of the resources of a cartridge. Admittedly, the Common Cartridge access control alone does not offer serious protection for the content; it is not a Digital Rights Management. However for the main intended scenario – blended learning – this is not a major issue according to the discussion with content owners in the Common Cartridge Specification Group: When content is delivered for import into an LMS, this is usually accompanied by a legal contract between the content owner and the provider of the LMS. Experience shows that institutions reasonably try to protect the content they purchased. Where content is delivered to individuals using stand-alone players for their own studies, further DRM measures might be appropriate, but, as said before, this is rather the realm of SCORM than of Common Cartridge – and even SCORM does not include DRM so far.

The Common Cartridge specification intentionally avoids specifying anything which LMSs are good at. Its sole purpose is the delivery of content as raw material for building complex interactive course experience with whatever tool is appropriate. It is assumed that teachers and instructional designers will use the tools they are used to, in particular the LMS, to add such features like sequencing or tests. It is also perfectly in line with the intention of Common Cartridge to mix cartridge content with specialized content that utilizes particular strengths of the particular LMS in order to deliver a learning experience that is better than can be obtained by just providing a cartridge in a player.

The difference in purpose between SCORM and Common Cartridge becomes particularly clear when we consider their potential use in connection with the IMS Learning Design (LD) specification. A learning design will consider a SCORM module as one resource. It will reference it in the design at the appropriate place and an LD player will have to call a SCORM player with this SCORM module at runtime when reaching this place in the design. Hence, in case of SCORM, all interaction with the SCORM module will happen at runtime.

While this is possible as well with a Common Cartridge, it is not its main intended usage. In order to enable the instructional designer to build better courses with a Common Cartridge, the LD editor must provide him/her with access to the individual items of the cartridge so that he/she can select them for inclusion into the course design. Once selected, they must be used to configure the required resources, for example a discussion forum for a particular discussion topic for use in the LD player. At runtime the LD player will use these resources. Hence in case of Common Cartridge the primary interaction with the cartridge will not be at runtime but at the time when the course is designed.

Summary

Both, SCORM and Common Cartridge, can be used to deliver content. However, beyond that, they are tailored to support different learning scenarios and different roles of users. In this note we discussed how this suggests a different usage of content and inherently different forms of support for these specifications by learning tools.